WHAT IS CLAIMED IS:

1. An electric motor comprising:

a stator including a stator core, a first and second lamination stack, a flux tube extending therethrough, and windings on said stator core;

a rotor including a hub having an inner surface, a magnet coupled to said hub inner surface, and a shaft received in said stator core for rotation of said rotor relative to said stator about a longitudinal axis of said shaft; and

a housing adapted to support said stator and said rotor.

2. An electric motor in accordance with Claim 1 wherein said rotor hub defining a cavity opening at one axial end of said hub and receiving a portion of said stator therein, said rotor shaft disposed at least partially within the cavity.

3. An electric motor in accordance with Claim 1 wherein said magnet comprises a first end, a second end, and an inner surface defining a bore extending between said first end and said second end such that a portion of said stator and said rotor shaft extend into the magnet bore, said magnet further comprising an outer surface.

4. An electric motor in accordance with Claim 3 wherein said magnet inner surface comprises a plurality of projections extending between said magnet first and second ends.

5. An electric motor in accordance with Claim 3 wherein said magnet inner surface comprises a plurality of notches extending between said magnet first and second ends.

6. An electric motor in accordance with Claim 3 wherein said magnet inner surface comprises a plurality of serrations extending between said magnet first and second ends.

7. An electric motor in accordance with Claim 3 wherein said magnet inner surface comprises a plurality of skewed serrations extending between said magnet first and second ends.

8. An electric motor in accordance with Claim 3 wherein said magnet outer surface comprises a plurality of serrations extending between said magnet first and second ends.

9. An electric motor in accordance with Claim 1 wherein said stator core and winding are substantially encapsulated in a thermoplastic encapsulation material formed with a generally annular skirt projecting radially outwardly from said encapsulated stator core, said skirt in close proximity with said rotor to define an exterior rotor/stator junction, said skirt having a beveled edge for deflecting water away from said junction thereby to inhibit entry of water between said rotor and stator.

10. An electric motor in accordance with Claim 1 further comprising a printed circuit board having an electrical connection to said winding and free of other connection to said stator, said printed circuit board having an interference fit with said housing and free of other connection to said housing.

11. An electric motor in accordance with Claim 1 wherein each said lamination stack comprising a plurality of laminations configured to be stacked together, each said lamination comprising:

a body having an outer edge;

a central opening extending through said lamination body and aligned with a stator core central opening;

a plurality of pole pieces extending axially from a lamination outer edge; and

a notch extending through said lamination body from the lamination body central opening to said lamination body out edge.

12. An electric motor in accordance with Claim 11 wherein said stator core includes ribs projecting radially inwardly toward the central opening of said stator core and engaging said pole pieces, said pole pieces shearing material from at least one of said ribs upon assembly of said pole pieces and a flux tube with said stator core so that said at least one rib has a reduced radial thickness.

13. An electric motor in accordance with Claim 11 wherein each lamination body comprises four pole pieces, said pole pieces formed by bending each pole piece to an approximate right angle with respect to said lamination body after said lamination body is formed by stamping.

14. An electric motor in accordance with Claim 1 wherein said stator further comprises a flux tube extending through said first lamination stack, said stator core, and said second lamination stack, said flux tube comprising a bronze bearing press fitted therein, a central bore configured to receive said rotor shaft extending therethrough, and a slit extending axially along said flux tube.

15. An electric motor in accordance with Claim 1 further comprising a printed circuit board having programmable components adapted to control the operation of said motor, said printed circuit board positioned in said housing and having electrical contacts thereon, said housing having a port formed therein and generally aligned with said contacts on said printed circuit board such that said contacts are accessible through said port for connection to a microprocessor.

16. An electric motor in accordance with Claim 1 further comprising a printed circuit board electrically connected to said winding and disposed generally in said housing, said printed circuit board having a power contact mounted thereon for receiving electrical power for said winding, said housing formed with a plug receptacle for receiving a plug from an external electrical power source into connection with said power contact, said power contact positioned in said plug upon connection of said plug to said power contact, said housing including a plug locator for locating said plug relative to said power contact so that said contact is received only partially into said plug upon connection to said plug.

17. An electric motor in accordance with Claim 1 wherein said motor comprises an efficiency between approximately 30% and 60%.

18. An electric motor in accordance with Claim 1 wherein said motor comprises an efficiency between approximately 35% and 50%.

19. An electric motor in accordance with Claim 1 wherein said motor comprises an efficiency of approximately 45%.

20. An electric motor comprising:

a stator including a stator core, a first and second lamination stack, a flux tube extending through said first and second lamination stack, and a winding on said stator core; each said lamination stack comprising a plurality of laminations configured to be stacked together, each said lamination comprising a body having an outer edge, a central opening aligned with said stator core central opening and configured to receive said flux tube, a plurality of pole pieces extending axially from said lamination outer edge, and a notch extending through said lamination body from said lamination body central opening to said lamination body out edge;

a rotor comprising a hub, an inner surface, a magnet coupled to said hub inner surface, and a shaft received in said stator core for rotation of said rotor relative to said stator about a longitudinal axis of said shaft; and

a housing adapted to support said stator and said rotor.

21. An electric motor in accordance with Claim 20 wherein said magnet comprises a first end, a second end, and an inner surface defining a bore extending between said first end and said second end such that a portion of said stator and said rotor shaft extend through said magnet bore.

22. An electric motor in accordance with Claim 20 wherein said magnet inner surface comprises at least one of a plurality of projections extending between said magnet first and said magnet second end, a plurality of notches extending between said magnet first end and said magnet second end, a plurality of

serrations extending between said magnet first end and said magnet second end and a plurality of skewed serrations extending between said magnet first end and said magnet second end.

23. An electric motor in accordance with Claim 20 wherein said magnet outer surface comprises a plurality of serrations extending between said magnet first end and said magnet second end.

24. An electric motor in accordance with Claim 20 wherein said motor comprises an efficiency between approximately 30% and 60%.

25. An electric motor in accordance with Claim 20 wherein said motor comprises an efficiency between approximately 35% and 50%.

26. A method of assembling an electric motor comprising the steps of:

inserting a stator at least partially within a housing, the stator including a stator core, a first and second lamination stack, a flux tube extending therethrough, and a winding wound on the stator core;

inserting a rotor at least partially within the stator core to form a stator/rotor subassembly, the rotor including a shaft and a hub having a magnet therein, the rotor being mounted for rotation relative to the stator about a longitudinal axis of the rotor shaft; and

snap connecting the stator/rotor subassembly to the housing.

27. A method of assembling an electric motor in accordance Claim 26 wherein the rotor comprises a magnet including a first end, a second end, and an inner surface defining a bore extending therebetween such that a portion of the stator and the rotor shaft extend through the magnet bore.

28. A method of assembling an electric motor in accordance with Claim 26 further comprising installing a printed circuit board on the stator by

electrically connecting the printed circuit board to the winding of the stator, the printed circuit board free of any other fixed connection to the stator.

29. A method of assembling an electric motor in accordance with Claim 26 wherein the stator is formed by:

stamping each lamination such that each lamination has a plurality of pole pieces extending radially therefrom;

bending each pole piece to substantially a right angle with the lamination body; and

forming each lamination stack by mechanically coupling the laminations onto each other such that each pole pieces is aligned.

30. A method of assembling an electric motor in accordance with Claim 29 wherein inserting the stator comprises radially locating a first and second lamination stack made of ferromagnetic material relative to a central longitudinal axis of the stator core from a flux tube receivable in a central opening of the stator core.

31. A method of assembling an electric motor in accordance with Claim 30 wherein locating the first and second lamination stacks comprises forcing the first and second lamination stacks into the central opening in a space between the flux tube and the stator core.

32. A control circuit for an electric motor comprising:

a power supply circuit comprising a diode bridge and a capacitor connected to a resistor and a zener diode; and

a power switching circuit for commutating a stator of the motor, the power switching circuit comprising power switches for selectively connecting the dc power source through the power supply circuit to a winding of the stator.

33. A control circuit in accordance with Claim 32 wherein the power switching circuit comprises a pair of diodes configured to regulate the position of the power switches.